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Northwest Ohio: Industry Driver and Occupational Highlights

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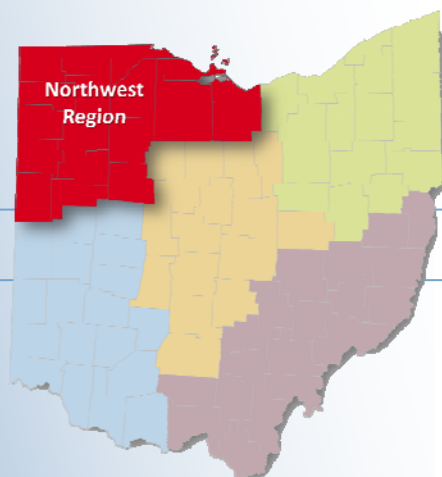


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Northwest Ohio's most concentrated industries include the Metals and Machining Industries (focusing on motor vehicle parts manufacturing, stamping and transmission and power train parts manufacturing), Transportation Equipment Manufacturing (including light truck and utility vehicle manufacturing) with a growth rate that matches the nation's and well outpaces the State's, and Chemicals & Chemical-based Products (including plastics product manufacturing) with a growth rate expected to outpace the U.S. rate by 2015.

Unlike other urban regions of the State, Northwest Ohio has low concentrations of employment in the Business and Financial Services or Information Technology Industries. The Health Industry is a fairly concentrated industry in the region, and employs nearly 90,000 people.

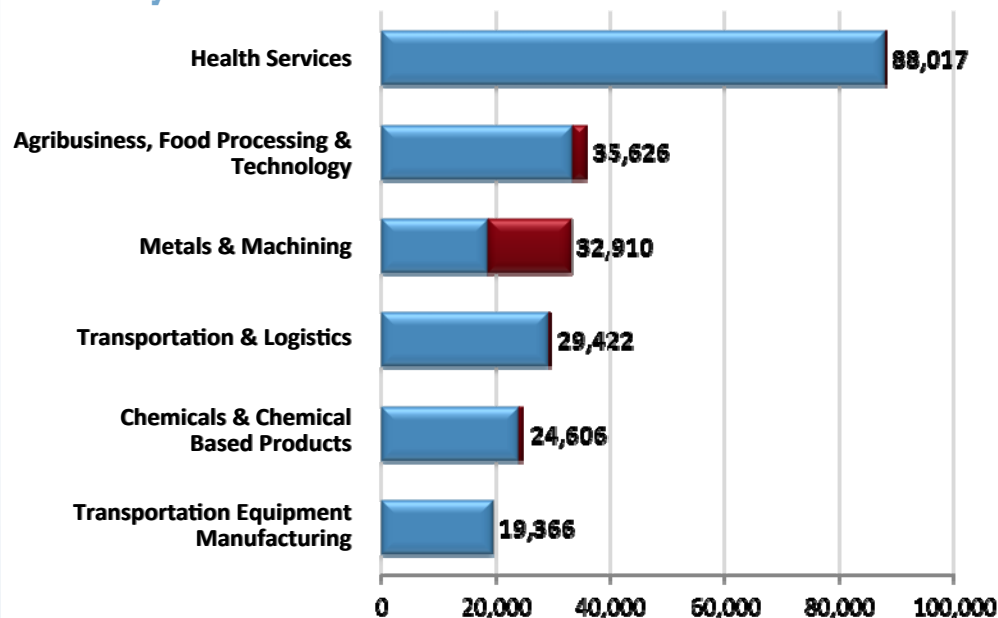
The bar chart to the right presents total employment in each industry group, with the shaded area of the bar indicating employment that is double counted across more than one industry group.

The bubble chart presents the location quotient (LQ) for the industry groupings. Economists commonly cite LQs over 1.25 as indicating competitive advantage. A regional LQ of 1.25 means regional employment is 25% higher than the national average in the selected industries. The chart shows that most of Northwest Ohio's highly concentrated industries are expected to become more concentrated over the next five years. While Transportation Manufacturing's concentration is expected to decline, that is part of a national trend and bucks the statewide trend of a 10% decline in concentration.

Northwest Ohio:

Industry Driver & Occupational Highlights

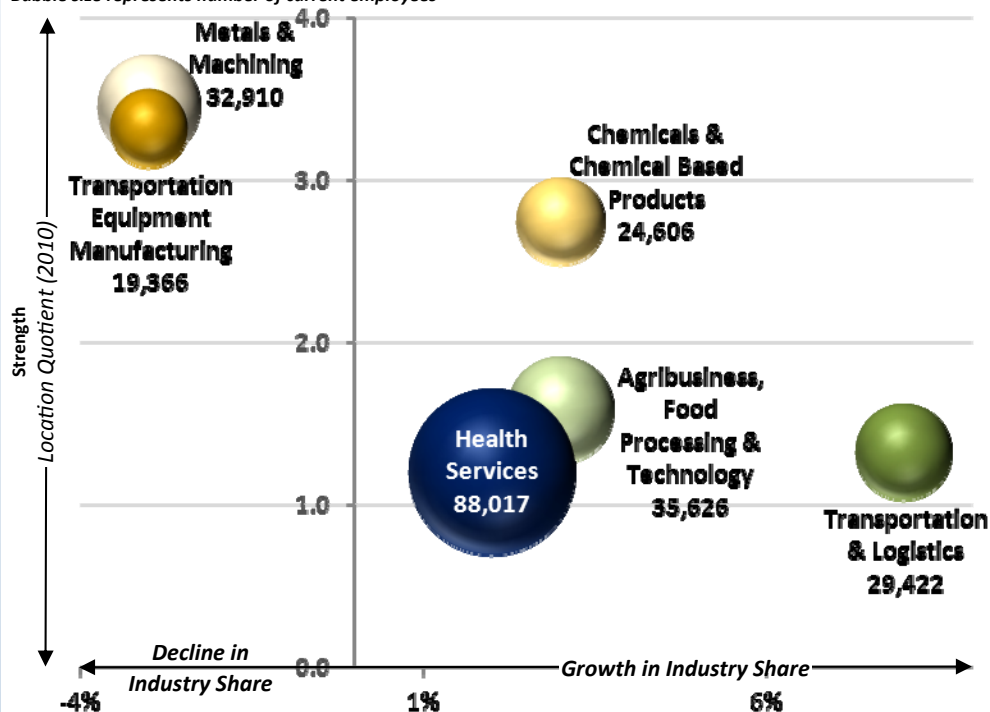
Industry Drivers



Source: EMSI Complete Employment - 1st Quarter 2011, accessed June 2011

Current Job Base Analysis & Estimated 5-Year Change

Bubble size represents number of current employees



Five-year Projected Change in Location Quotient

Source: EMSI Complete Employment - 1st Quarter 2011, accessed June 2011

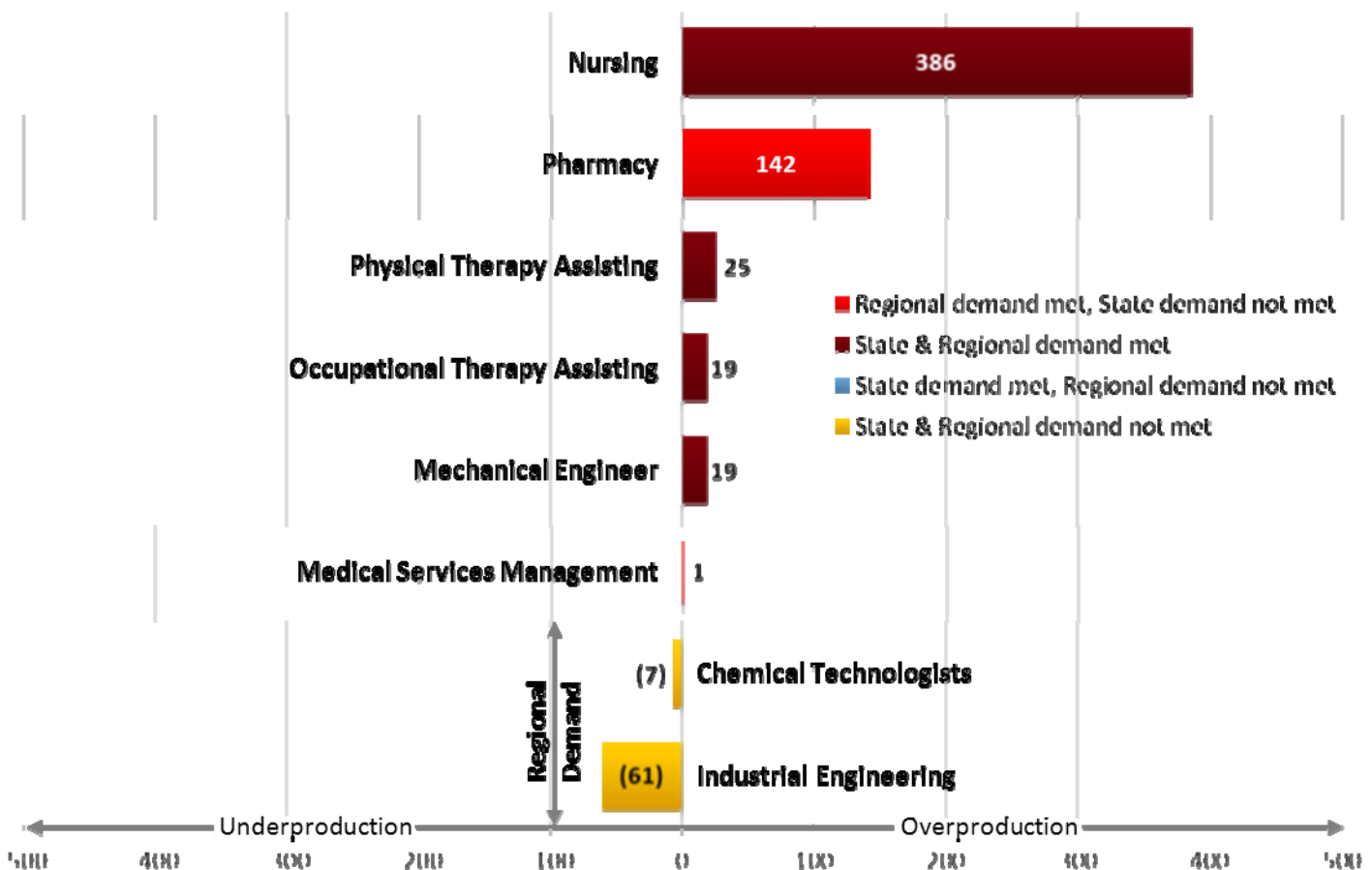
NORTHWEST OHIO: Industry Driver & Occupational Highlights



Regional and State Supply Challenges

The US Department of Labor's *Occupational Supply and Demand System* relates occupations with postsecondary courses. In this way, the demand for occupations can be related to the supply of graduates. Gaps are created by both oversupply and undersupply. Northwest Ohio appears to be a statewide supplier in Pharmacy since the region has an oversupply while the State has an undersupply. While there appears to be a current oversupply of nurses, forecasts show that demand should become strong in 2013 and continue to climb from that point.

The chart indicates almost no undersupply issues among the selected occupations for Northwest Ohio. One area to focus includes Industrial Engineers, with an undersupply of 61 graduates each year regionally and an undersupply at the State level, thus making it difficult to recruit graduates from other parts of Ohio. Furthermore, the national estimate of openings resulting from workers retiring from or permanently leaving the Industrial and the Mechanical Engineering occupations shows a replacement rate of nearly 12% today with that rate doubling by 2018.



Note: A retention factor was applied to the completers total. According to the Performance Report for Ohio's Colleges & Universities, 2006, the in-state retention rate for those with a bachelor's degree or higher was roughly 73% for Ohio & 87% for individuals with an associate's degree. In Engineering, the retention factor is 68% for those with a bachelor's degree, 44% for those with a master's degree, and 28% for those with a doctoral degree.

Source: EMSI Complete Employment - 1st Quarter 2011, accessed June 2011



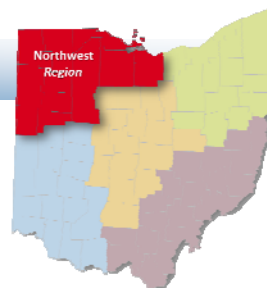
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NORTHWEST OHIO: Industry Driver & Occupational Highlights



Occupational Concentration

The table below presents a comparison of occupational groups in terms of their relative concentration in Northwest Ohio, the projected job growth, and annual openings. It shows the same information for the Toledo MSA. Occupations that require an associate's degree or more are presented. Northwest Ohio's strongest concentrations of employment are in health occupations and the Industrial Engineering occupation. For example, Occupational Therapy Assistants (LQ=2.5), Physical Therapy Assistants (LQ=1.8), Nurses (LQ=1.3), and Industrial Engineers (LQ=1.9) each have location quotients (LQs) over 1.25.

Northwest Ohio has nearly 10,000 engineering jobs, and Industrial Engineers are the most prevalent among those followed by Mechanical Engineers. Combined, these two engineering occupations account for 34% of all engineering jobs in Northwest Ohio. While the growth in those occupations is modest to flat, the replacement needs are substantial.

The table also presents data at the Metropolitan Statistical Area (MSA) level. The Toledo MSA accounts for more than 50% of the health related occupations; however, the MSA accounts for only 35% of the Industrial Engineers and 42% of the Mechanical Engineers. Those jobs are more distributed with substantial employment in Hancock and Allen counties.

	Nursing	Pharmacy	Medical Services Management	Physical Therapy Assistant	Occupational Therapy Assistant	Industrial Engineer	Mechanical Engineer	Chemical Technologist	
2011 LQ	1.3	1.2	1.1	1.8	2.5	1.9	1.5	1.1	Northwest Ohio
2011 Jobs	15,413	1,417	1,629	939	436	1,770	1,571	746	
2011-16 Growth	1,144	123	110	89	35	57	4	20	
Annual Openings	497	56	52	32	14	66	51	18	
2011 Jobs	8,974	786	829	476	267	612	665	316	Toledo MSA
2011-16 Growth	747	70	59	23	14	16	-10	8	
Annual Openings	281	30	26	11	6	22	20	10	

Source: EMSI Complete Employment - 1st Quarter 2011, accessed June 2011

Northwest Ohio has 80,500 production jobs. From 2011 to 2016, openings are expected to total over 11,000, which are primarily due to replacement jobs for those retiring, etc. That estimate does not include the additional jobs pending due to Chrysler investments. The table below presents the occupations with the highest employment among production jobs. The replacement rates due to retirement, etc., range from a low of 6.8% to a high of 14.9%. Welders and Assemblers/Fabricators are among the most highly paid of these occupations, and each of these occupations is on the high end of the replacement rate range (14.9% and 11%, respectively).

SOC Code	Description	2011 Jobs	2016 Jobs	2011-2016 Replacement Needs	Median Hourly Wage	Replacement Rates
51-2092	Team assemblers	9,383	8,958	1,300	\$15.03	11.0%
51-1011	First-line supervisors/managers of production and operating workers	5,414	5,299	485	\$22.97	6.8%
51-4041	Machinists	4,497	4,332	439	\$18.19	6.8%
51-9198	Helpers--Production workers	3,806	3,758	477	\$10.97	6.8%
51-2099	Assemblers and fabricators, all other	3,727	3,263	515	\$21.68	11.0%
51-9061	Inspectors, testers, sorters, samplers, and weighers	3,426	3,297	379	\$16.00	8.6%
51-9111	Packaging and filling machine operators and tenders	2,592	2,621	317	\$14.93	8.5%
51-4031	Cutting, punching, & press machine setters, operators, & tenders, metal & plastic	2,491	2,253	281	\$13.67	10.5%
51-9199	Production workers, all other	2,466	2,370	360	\$13.72	11.0%
51-4072	Molding, coremaking, & casting machine setters, operators, & tenders, metal & plastic	2,352	2,225	322	\$13.49	10.5%
51-4121	Welders, cutters, solderers, and brazers	2,106	2,037	357	\$17.09	14.9%

Source: EMSI Complete Employment - 1st Quarter 2011, accessed June 2011